



Application No: GB 9911354.0  
Claims searched: 1 - 13

Examiner: P. Gardiner  
Date of search: 28 July 1999

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.Q): EIJ: JGR

Int Cl (Ed.6): E05D, E06B

Other: Online: WPI, PAJ, EPODOC

**Documents considered to be relevant:**

Category	Identity of document and relevant passage		Relevant to claims
X,Y	GB 2314112 A	SANKEY & YEOMANS (e.g. Fig's. 1-3)	X:1-8,11,12 Y:9,10
X,Y	GB 2265929 A	MARCHINGTON (e.g. Fig's. 3 & 4)	X:1-8,12 Y:9,10
X,Y	GB 2254355 A	RENTON (e.g. Fig.3)	X:1-8,12 Y:9,10
X,Y	NL 8303162	HOUWELING (e.g. Fig.2)	X:1-8,12 Y:9,10
Y	WO 98/19037 A1	HELLSTROM (e.g. Fig.1 attachment leg 41)	Y:9
Y	GB 2138478 A	MAGUIRE (e.g. Fig.1)	Y:10

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference	<b>FOR FURTHER ACTION</b> <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/GB 99/ 02439</b>	International filing date (day/month/year) <b>09/08/1999</b>	(Earliest) Priority Date (day/month/year)
Applicant  <b>FINGERSHIELD (UK) LIMITED et al.</b>		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

1  
☐ None of the figures.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference PLB/CC/Q447	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/GB99/02439	International filing date (day/month/year) 09/08/1999	Priority date (day/month/year) 09/08/1999
International Patent Classification (IPC) or national classification and IPC E06B7/36		
Applicant FINGERSHIELD (UK) LIMITED et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 9 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☒ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☒ Certain defects in the international application
- VIII ☒ Certain observations on the international application

Date of submission of the demand  06/03/2001	Date of completion of this report  09.10.2001
Name and mailing address of the international preliminary examining authority:   European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465	Authorized officer  Geisenhofer, M  Telephone No. +49 89 2399 2717 

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/02439

## I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

### Description, pages:

1-6 as originally filed

### Claims, No.:

1-13 as originally filed

### Drawings, sheets:

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/02439

☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

*(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)*

6. Additional observations, if necessary:

### III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been examined in respect of:

☐ the entire international application.

☒ claims Nos. 13.

because:

☐ the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

☒ the description, claims or drawings (*indicate particular elements below*) or said claims Nos. 13 are so unclear that no meaningful opinion could be formed (*specify*):  
**see separate sheet**

☐ the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.

☐ no international search report has been established for the said claims Nos. .

2. A meaningful international preliminary examination cannot be carried out due to the failure of the nucleotide and/or amino acid sequence listing to comply with the standard provided for in Annex C of the Administrative Instructions:

☐ the written form has not been furnished or does not comply with the standard.

☐ the computer readable form has not been furnished or does not comply with the standard.

### V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims 9-11

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/GB99/02439

	No:	Claims	1-8,12
Inventive step (IS)	Yes:	Claims	
	No:	Claims	9-11
Industrial applicability (IA)	Yes:	Claims	1-12
	No:	Claims	

2. Citations and explanations  
**see separate sheet**

## VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

**see separate sheet**

## VII. Certain defects in the international application

The following defects in the form or contents of the international application have been noted:  
**see separate sheet**

## VIII. Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:  
**see separate sheet**

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB99/02439

The following documents are referred to in this report:

D1: WO 92 15763 A

D2: GB-A-2 314 112

D3: US-A-5 220 708

D4: NL-A-8 501 481

**Re Item III**

Non-establishment of opinion with regard to novelty, inventive step and industrial applicability

1. Claim **13** contains only a reference to the drawings. According to Rule 6.2(a) PCT, claims should not contain such references except where absolutely necessary, which is not the case here.

Thus claim **13** does not contain any feature having a contribution to the definition of the claimed device. Therefore claim **13** was not considered when establishing an opinion with regard to novelty and inventive step.

**Re Item V**

Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

2. The present application does not meet the requirements of Article 33(1) PCT, because the subject-matter of claims **1 - 8** and **12** is not new in the sense of Article 33(2) PCT and therefore the requirements of Article 33(1) PCT are not met.
  - 2.1 Document **D1** discloses in figures 1, 3 and 4 as well as in the corresponding parts of the description (page 8 - 11) a finger protector device 10 comprising first, second and third members (12A, 13A and 14A). The second member 13A being connected between the first and third members 12A and 14A by flexible means (cf. page 8, last paragraph). The first member is arranged, in use, to be mounted to a first surface 30 and the third member is arranged, in use, to be mounted to a second surface 31, in which relative movement of the first and second surfaces is possible.
  - 2.2 Thus all claim **1** features are known in combination from **D1**.

2.3 **D1** furthermore discloses the following features:

- a) The flexible means provide a pivotal connection.
- b) The relative movement of the first and second surfaces creates or close a gap between the surfaces.
- c) The first surface is a door.
- d) The second surface is a door frame.
- e) First, second and third members are elongate members.
- f) First member has a mounting portion connected thereto by flexible means.
- g) Third member has a mounting portion connected thereto by flexible means.
- h) The finger protector device has a substantially uniform cross-section along its length.

2.4 Thus all features of dependent claims **1 - 8** and **12** in combination with the features of the claim they refer to are already known from **D1**.

2.5 The documents **D2**, **D3** and **D4** also show all features of claims **1 - 8** and **12** therefore being novelty-destroying.

3. The present application does not meet the requirements of Article 33(1) PCT, because the subject-matter of claims **9 - 11** does not involve an inventive step in the sense of Article 33(3) PCT.

3.1 The unmotivated choice of different thicknesses cannot be considered to be inventive without any special technical effect related to this design detail (ref. claim **9**).

3.2 The use of a plastics joint to attach the mounting portion to the corresponding member is known from **D1**. The subject-matter of claim **10** differs from the device known from **D1** only in that the joint is pre-biased at about 90° relative to the corresponding member.  
This is matter of normal design procedure and cannot be considered to involve an inventive step. If the skilled person would not consider this feature from his expert knowledge, **D2** discloses the teaching to disclose an angle of about 90° between mounting portions and the corresponding members (cf. e. g. figure 1).



**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB99/02439

- 3.3 Even if the surfaces defined in claim 11 would form part of the claimed device, these features (slots for engagement of the mounting portions) would result from a normal design procedure; therefore the subject-matter of claim 11 could not be considered to be inventive.

**Re Item VI**

Certain documents cited

Certain published documents (Rule 70.10):

Application No

Patent No Publication date

(day/month/year) Filing date

(day/month/year) Priority date (valid claim)

(day/month/year)

GB-A-2 339 587 2.2.2000 17.5.1999 14.7.1998

**Re Item VII**

Certain defects in the international application

4. According to PCT Guidelines II-4.6 the invention as claimed should be disclosed in the description in such a way that the technical problem with which it deals can be appreciated and the solution can be understood. In the description as currently on file this criteria is not fulfilled because neither a problem nor a corresponding solution is described in the description. The vague statement "to overcome ... at least one problem associated with the prior art whether referred to herein or otherwise" cannot be considered to overcome this problem.
5. The statements in the description from page 5, line 32 to page 6, line 20 imply that the subject-matter for which protection is sought may be different to that defined by the claims, thereby resulting in lack of clarity of the claims (Article 6 PCT when used to interpret them (see the Guidelines III-4.3a). These statements are therefore not allowable.
6. The incorporation of a document in the description as on page 5, lines 25 - 30 is only allowable under the conditions defined in the PCT Guidelines II-4.17 which is not the case. Thus this statement is not allowable.

- 7.1 A document reflecting the prior art described on page 1, is not identified in the description (Rule 5.1(a)(ii) PCT).
- 7.2 Contrary to the requirements of Rule 5.1(a)(ii) PCT, the relevant background art disclosed in the documents **D1** and **D2** is not mentioned in the description, nor are these documents identified therein.

**Re Item VIII**

Certain observations on the international application

8. The application does not meet the requirements of Article 6 PCT, because claims **3 - 5, 7 - 9, 11** and **13** are not clear.
- 8.1 In Claim **1** the device is defined "to be mounted" to a first and second surface, thus both surfaces do not form part of the claimed device.  
In claims **3 - 5** characteristics are given defining the two surfaces but not the claimed finger protector device. The same applies to claim **11**.  
Thus these claims have no contribution to the definition of the claimed device and should have been removed.
- 8.2 In claims **7** and **8** the term "and is connected by flexible means" is not clear. One does not know which part the mounting portion is connected to apart from the corresponding member.  
For the purpose of this report it is assumed that "the mounting portion is connected to the first/third member by flexible means" is meant.
- 8.3 The comparison of thicknesses in claim **9** is not clear: A three-dimensional member has three different thicknesses. Without definition of the orientation of the thickness one does not know which thicknesses are meant.
9. Claim **12** does not fulfill the criteria set out in Article 6 PCT in that it is not concise. Most of the features are repetitions of features already defined in previous claims.
10. The features of the claims are not provided with reference signs placed in parentheses (Rule 6.2(b) PCT).

**INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT - SEPARATE SHEET**

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International application No. PCT/GB99/02439

11. Independent claim 1 is not in the two-part form in accordance with Rule 6.3 b) i) and ii) PCT, which in the present case would be appropriate, with those features known in combination from the prior art (document **D1**) being placed in the preamble and with the remaining features being included in the characterising part.
- \_\_\_\_\_
- - - - -

## PATENT COOPERATION TREATY

PCT

## NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner  
 US Department of Commerce  
 United States Patent and Trademark  
 Office, PCT  
 2011 South Clark Place Room  
 CP2/5C24  
 Arlington, VA 22202  
 ETATS-UNIS D'AMERIQUE  
 in its capacity as elected Office

Date of mailing (day/month/year) 12 June 2001 (12.06.01)	
International application No. PCT/GB99/02439	Applicant's or agent's file reference
International filing date (day/month/year) 09 August 1999 (09.08.99)	Priority date (day/month/year)
Applicant GARVEY, Frank	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:  
 06 March 2001 (06.03.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was

☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer Olivia TEFY Telephone No.: (41-22) 338.83.38
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## FINGER PROTECTOR DEVICE

### Field of the Invention

5       The invention relates to finger protector devices, especially (but not limited to) finger protector devices for door hinges.

### Background to the Invention

10

Hinge mechanisms for doors and similar openings are generally arranged such that on opening the door a gap is formed between the internal face of the door and the adjacent door frame. On closing the door this gap is  
15 inevitably reduced until the door is closed. Therefore, during closing any objects protruding into the gap are squeezed or trapped. This is a frequent cause of accidents whereby fingers are trapped between the door and adjacent door frame. Such accidents can be painful and can result  
20 in serious injuries. These accidents can be especially commonplace and distressing for young children. Furthermore, the use of doors comprising automatic closing means, such as springs, can result in high closing forces.

25       It is an aim of the present invention to overcome or obviate at least one problem associated with the prior art, whether referred to herein or otherwise.

### Summary of the Invention

30

According to the present invention there is provided a finger protector device comprising first, second and third members, the second member being connected between the

first and third members by flexible means, the first member is arranged, in use, to be mounted to a first surface and the third member is arranged, in use, to be mounted to a second surface, in which relative movement of the first and  
5 second surfaces is possible.

The flexible means may provide a pivotal connection.

The relative movement of the first and second surfaces  
10 may create or close a gap between the surfaces.

The first surface may be a door. Suitably the second surface is a door frame.

15 The first, second and third members may be elongate members.

The first member may have a mounting portion connected thereto and suitably connected by flexible means. The  
20 third member may have a mounting portion connected thereto and suitably connected by flexible means. The or each mounting portion or portions may be thicker than the first, second and third members. This assists in fixing the device to a door or frame. The or each mounting portion or  
25 portions may be attached to a member by a flexible plastics joint which is pre-biased at about 90° relative to the member to which it or they is or are attached.

The first and second surfaces may have slots mounted  
30 thereto in order to engage the mounting portions of the first and third faces respectively.

The door frame may be connected to a first mounting portion which is pivotally connected to the first member which is pivotally connected to the second member which is pivotally connected to a third member which is pivotally connected to a second mounting portion which is connected to a door, in which the first, second and third members and the first and second mounting portions are all elongate members, and in which the finger protector device has a substantially uniform cross-section along its length.

10

#### Brief Description of the Drawings

The present invention will now be described by way of example only, with reference to the drawings that follow in which:

15

Figure 1 is a cross-section of a safety device for a door.

Figure 2 is a cross-section of a door in a closed position with a safety device attached.

20

Figure 3 is a cross-section of a door in a partially open position with a safety device attached.

25

Figure 4 is a cross-section of a door in an open position with a safety device attached.

#### Description of the Preferred Embodiments

30

As shown in Figure 1, the cross-section of the safety device 10 is approximately a right angled triangle. However, prior to formation the safety device 10 is

substantially planar. The sides of the safety device 10 are formed from elongate strips of a suitable plastics material. Hinge sections 22, 24 connect the first side 16 to the second side 14 and the third side 12 to the second side 14 respectively. The hinge sections 22, 24 are formed from a flexible material. The use of flexible hinge sections reduce the opportunity of any pinching action which may result from mechanical hinge sections.

10 Connecting portions 18, 20 are provided to mount the safety device 10 to a door 30 and adjacent frame 32 or wall. The connecting portions 18, 20 are connected to the first and third sides 16, 12 by flexible hinge sections 28, 26 respectively. Connecting portions 18, 20 may be made 15 thicker than sides 12, 14, 16 to assist in mounting. To assist in mounting and in the motion of the device, the flexible joints joining connecting portions 18, 20 to sides 12, 16 respectively may be pre-biased to about 90°.

20 In order to mount the safety device 10 to a door 30 and adjacent frame 32 slots (not shown) are initially affixed to the door 30 at an inner position and to an adjacent position on the frame 32, as shown in Figure 2. The safety device 10 can then be mounted by securing the connecting 25 portions 18, 20 in the respective slots (not shown).

Alternatively, and as a preferred option with thicker connecting portions 18, 20 holes (not shown) may be provided in the connecting portions to allow for screw 30 fixing.

Once mounted the connecting portion 18 will move corresponding to the movement of the door 30 whilst the



connecting portion 20 will remain affixed to the frame. The flexible hinge sections 22, 24, 26, 28 enable the safety device 10 to reconfigure according to the relative orientation of the door 30 and the frame 32. As shown in  
5 Figure 2, when the door 30 is in a closed position the safety device 10 adopts a right angle triangle cross-section. Approximations of the cross-sections of the safety device 10 with the door 30 in a partially open position and providing a 90° open position are shown in  
10 Figure 3 and Figure 4 respectively. It can be seen that at all times during the opening of the door 30 the safety device 10 prevents access to the gap formed between the inner face of the door 30 and the adjacent door frame 32. Therefore, on the subsequent closing of the door 30 there  
15 is no opportunity for objects, especially fingers, to be trapped between the door 30 and the frame 32.

The configuration of the safety device 10 also enables the safety device 10 to function during opening angles  
20 substantially greater than 90°. The configuration of the safety device 10 also enables the safety device 10 to be mounted on an adjacent frame which is not at a right angle to the door, for example a bevelled frame or a flat frame.

25 The reader's attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and  
30 documents are incorporated herein by reference.

All of the features disclosed in this specification (including any accompanying claims, abstract and drawings),

and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

5

Each feature disclosed in this specification (including any accompanying claims, abstract and drawings), may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated  
10 otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

The invention is not restricted to the details of the  
15 foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so  
20 disclosed.

**CLAIMS**

1. A finger protector device comprising first, second and third members, the second member being connected  
5 between the first and third members by flexible means, the first member is arranged, in use, to be mounted to a first surface and the third member is arranged, in use, to be mounted to a second surface, in which relative movement of the first and second surfaces is possible.  
10
2. A finger protector device according to Claim 1, in which the flexible means provides a pivotal connection.  
15
3. A finger protector device according to Claim 1 or Claim 2, in which the relative movement of the first and second surfaces creates or close a gap between the surfaces.  
20
4. A finger protector device according to any preceding claim, in which the first surface is a door.
5. A finger protector device according to any preceding  
25 claim, in which the second surface is a door frame.
6. A finger protector device according to any preceding claim, in which the first, second and third members are elongate members.  
30
7. A finger protector device according to any preceding claim, in which the first member has a mounting

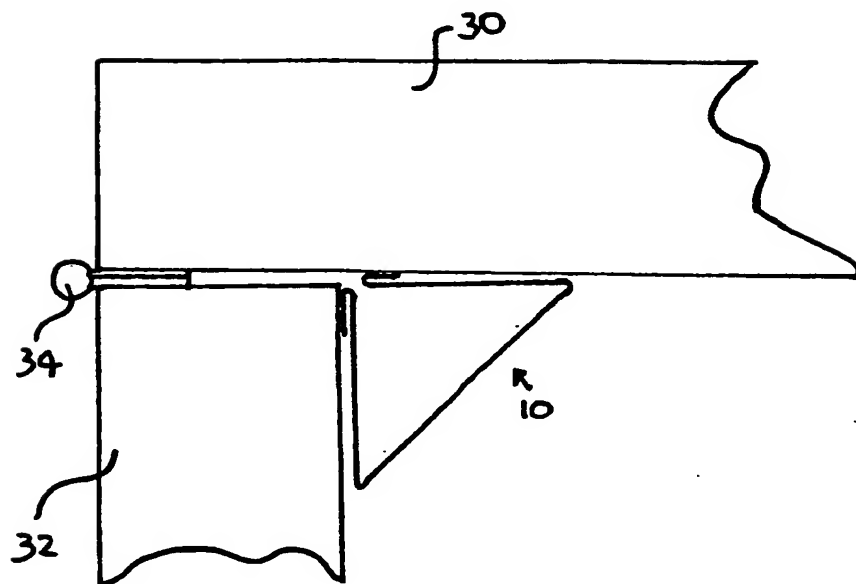
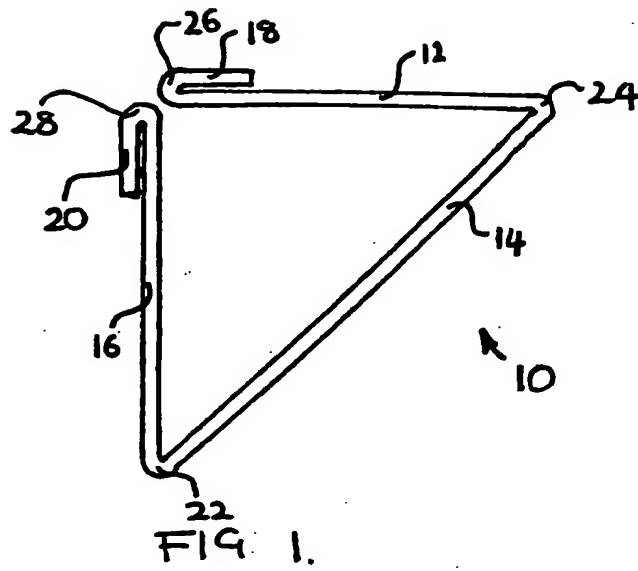
portion connected thereto and is connected by flexible means.

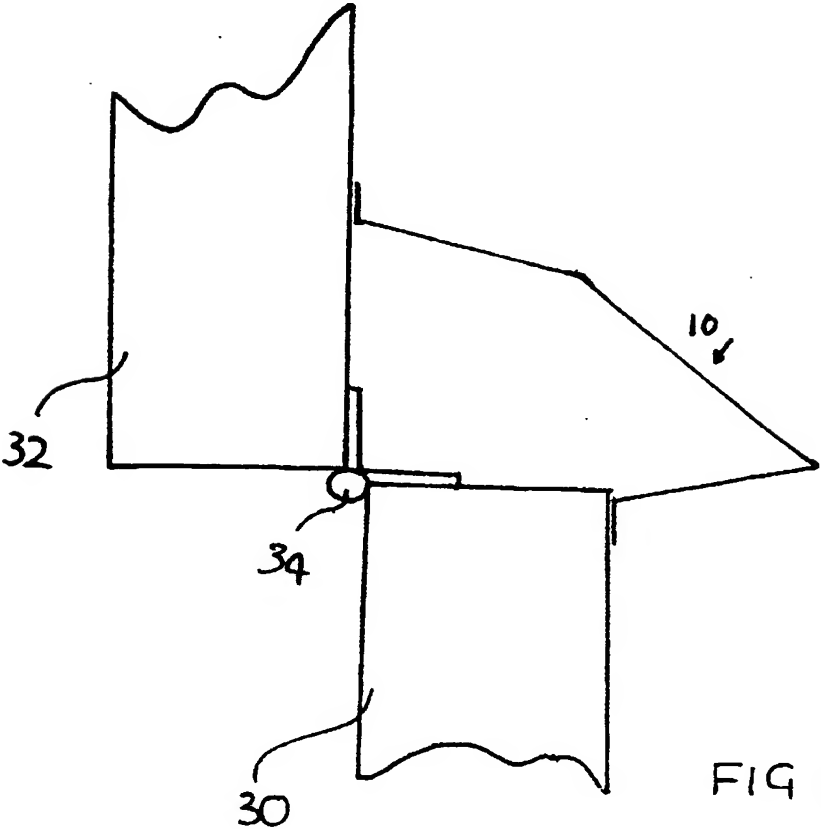
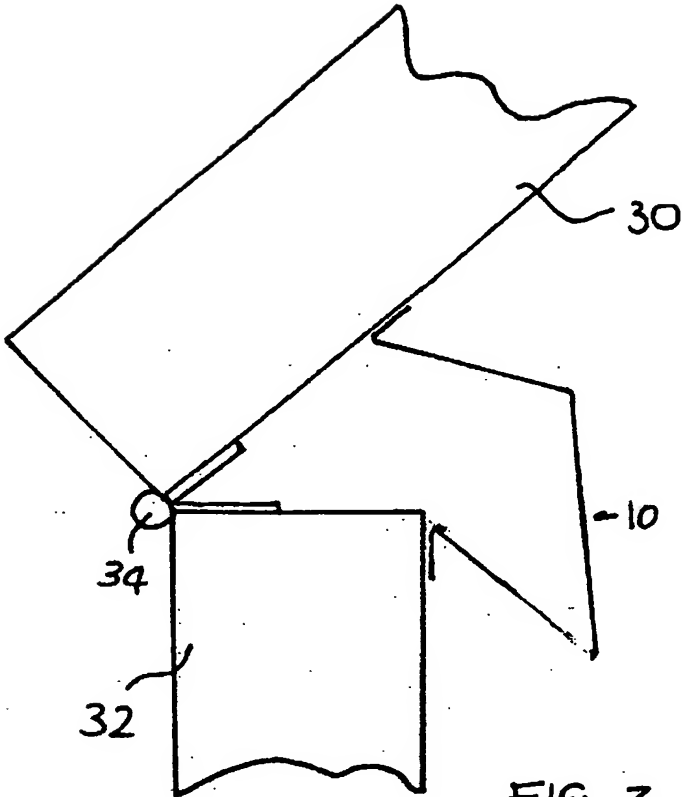
8. A finger protector device according to any preceding  
5 claim in which the third member has a mounting portion connected thereto and is connected by flexible means.
9. A finger protector device according to Claim 7 or  
10 Claim 8, in which the or each mounting portion or portions is or are thicker than the first, second and third members.
10. A finger protector device according to Claim 7 or  
15 Claim 8, in which the or each mounting portion or portions is attached to a member by a flexible plastics joint which is pre-biased at about 90° relative to the member to which it or they is or are attached.
- 20 11. A finger protector device according to Claim 7 or Claim 8, in which the first and second surfaces may have slots mounted thereto in order to engage the mounting portions of the first and third faces respectively.
- 25 12. A finger protector device according to Claim 7 or Claim 8, in which the door frame is connected to a first mounting portion which is pivotally connected to the first member which is pivotally connected to the  
30 second member which is pivotally connected to a third member which is pivotally connected to a second mounting portion which is connected to a door, in which the first, second and third members and the

first and second mounting portions are all elongate members, and in which the finger protector device has a substantially uniform cross-section along its length.

5

13. A finger protector device substantially as described herein with reference to the drawings that follow.





# INTERNATIONAL SEARCH REPORT

Int. Application No  
PCT/ES 99/02439

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 E06B7/36

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 E06B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	NL 8 501 481 A (PIETER ADRIANUS HOUWELING) 16 December 1986 (1986-12-16)	1-8, 12, 13
Y	page 2, line 3 -page 4, line 17 figures	9, 10
X	WO 92 15763 A (RENTON JULIAN ELWYN) 17 September 1992 (1992-09-17)	1-8, 12, 13
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☒ Further documents are listed in the continuation of box C.

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Date of the actual completion of the international search

28 March 2000

Date of mailing of the international search report

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# INTERNATIONAL SEARCH REPORT

Inter. Application No.  
PCT/GB 99/02439

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information on patent family members

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